comprising:

(a) heating a gaseous mixture including an organic silane and oxygen to cause the oxygen to react with the organic silane to form a first insulating layer having tensile stress;

(b) then irradiating the first insulating layer with a plasma to shift stress in the first insulating layer to more tensile;

(c) then forming a second insulating layer to have a compressive stress;

(d) alternating a combination of steps (a) and (b) with step (c) to form multiple first and second insulating layers; and

(e) forming a second insulating layer as an uppermost insulating layer with compressive stress to a thickness providing an overall stress for the whole insulating film less than a predetermined maximum value δ_T.

22. A method according to claim 21 wherein said second insulating layer is formed by plasma CVD.

23. A semiconductor device manufacturing method for forming a semiconductor device including a substrate supporting a conductive interconnection layer and a stress-adjusted, multilayer insulating film covering said interconnection layer, said method comprising:

(a) heating a gaseous mixture including an organic silane and oxygen to cause the oxygen to react with the organic silane to form a first insulating layer having tensile stress;

(b) then irradiating the first insulating layer with a plasma

to shift stress in the first insulating layer to more tensile;

(c) then forming a second insulating layer to have a compressive stress;

(d) alternating a combination of steps (a) and (b) with step (c) to form multiple first and second insulating layers; and

(e) forming a second insulating layer as an uppermost insulating layer with compressive stress to a thickness providing an overall stress for the whole insulating film less than a predetermined maximum value δ_T.

24. A method according to claim 23 comprising forming plural conductive interconnection layers alternately with the forming of said multilayered, stress-adjusted insulating film by steps (a), (b), (c) and (d).

25. A method according to claim 23 wherein said second insulating layer is formed by plasma CVD.

26. A semiconductor device manufacturing method comprising:

(a) forming a conductive interconnection layer on a substrate;

(b) heating a gaseous mixture including an organic silane and oxygen to cause the oxygen to react with the organic silane to form a first insulating layer having tensile stress;

(c) then irradiating the first insulating layer to shift stress in the first insulating layer to more tensile;

(d) then forming a second insulating layer to have a

compressive stress;

(e) alternating a combination of steps (b) and (c) with step (d) to form multiple first and second insulating layers; and

(f) forming a second insulating layer as an uppermost insulating layer with compressive stress to a thickness providing an overall stress for the whole insulating film less than a predetermined maximum value δ_T.

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27. A method according to claim 26 comprising forming plural conductive interconnection layers alternately with the forming of said multilayered, stress-adjusted insulating film by steps (b) through (e).

28. A method according to claim 26 wherein said second insulating layer is formed by plasma CVD.

29. A semiconductor device according to claim 17, wherein said interconnecting layer is aluminum and wherein said insulating film has a tensile stress or a compressive stress of less than $+3 \times 10^5$ dyne/cm.

30. A method according to claim 21 wherein δ_T is 3×10^5 dyne/cm.

31. A method according to claim 23 wherein δ_T is 3×10^5 dyne/cm.

32. A method according to claim 26 wherein δ_T is 3×10^5 dyne/cm.--

Please rewrite claims 2, 6, 10, 11 and 14 as follows:

2. (amended) A stress-adjusted insulating film forming method according to claim 21 [1], wherein the stress δ_T in said overall stress-adjusted insulating film is: [adjusted according to

Stress in overall stress-adjusted insulating film (δ_T)]

$$\delta_T = \sum_{i=1}^{n} (t_i X\ \delta_i)$$

wherein [(Where] t_i is a thickness of the i-th insulating layer [film] of said stress-adjusted insulating film, and δ_i is stress in the i-th insulating layer [film] of said stress-adjusted insulating film and wherein [()tensile stress is positive while the compressive stress is negative. [) .)]

6. (amended) A stress-adjusted insulating film forming method according to [any of] claim 21 [5], wherein said gas mixture further includes a gaseous impurity [containing gas].

10. (amended) A stress-adjusted insulating film forming method according to claim 21 [5], wherein the compressive stress in said second [said film forming condition of respective insulating films to adjust stress characteristics of respective] insulating layer [films] is adjusted by controlling at least one film-forming condition selected from the group consisting of [a] film forming temperature, type of gaseous reaction mixture [gas], and [a] flow rate of the gaseous reaction mixture [gas].

11. (amended) A stress-adjusted insulating film forming method according to claim 21 [1], wherein said second insulating layer [film] having compressive stress is formed [deposited] by plasma CVD employing, as a reaction mixture, [reacting] a gas mixture including organic silane and oxygen [containing gas by virtue of plasmanization].

14. (amended) A stress-adjusted insulating film forming method according to claim 11, wherein the compressive stress in said second [said film forming condition of respective] insulating [films] layer to adjust stress characteristics of respective insulating films is adjusted by controlling at least one film-forming condition selected from the group consisting of [a] frequency of plasma generating power, [a] bias power applied to said substrate, [a] film forming temperature, type of gaseous reactant [gas], and [a] flow rate of gaseous reactant [gas].

Claim 3, line 3, after "is" insert --a--;
line 4, after "or" insert --a--.

Claim 4, line 1, delete "a" and insert --21--; and
line 4, delete "any" and insert --one--.

Claim 8, line 1, delete "5" and insert --21--; and
line 10, after "is" insert --an--.